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Publication number: AE/LZT 123 4798 R3

Printed in USA

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Getting Started

Connecting and Removing Your Battery

Note! You can find your phone's model number by removing the battery and looking on the back of the phone.

1 Place the battery over the back of the phone. The label on the battery should face down. Insert the top portion of the battery into the phone. The tab on the bottom of the battery should be pointing toward the bottom of the phone.



2 Press down until you hear a click. The battery is now connected.



3 Remove the battery by pushing in on the tab of the battery with your thumb.



4 Then, lift the battery up and out of the battery cavity.



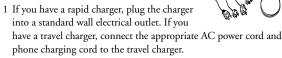
Charging Your Battery

Your Charger

Your phone was packaged with either a rapid or travel charger. It is important that you fully charge your battery before you use your phone. Both chargers supply power to charge your battery while the battery is attached to your phone. If your phone is On, it can receive calls while using either charger.



Never attach the charger to a phone that does not have a battery installed.



2 Hold the phone with the display and keypad facing up.

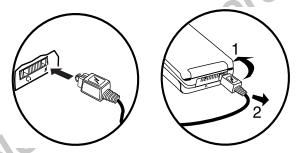
Getting Started 1

- 3 Hold the small plug on the charger cord so the lightning bolt symbol ($\mathbf{4}$) is up.
- 4 Align the small plug on the charger cord with the connector on the bottom of your phone. The connector on the phone is above the lightning bolt symbol.
- 5 Press the plug into the connector until the plug "snaps" into place. The battery icon is alternated with the - icon.

Do not twist while inserting or removing the small plug on the Note! charger cord!

6 Continue charging the phone until the battery is fully charged. Note! The battery is being charged when the battery icon is alternating with the - icon. The battery is fully charged when the icon is constant.

7 To disconnect the charger, lift the plug connected to the phone upwards (1) and pull it out (2).



Charge-Only Mode

If your phone is off, attaching the charger will cause the phone to activate in charge-only mode. When this mode is activated the message Changing Only appears in the display. Your phone is now fast (rapid) charging the battery. When your battery is fully charged, Battery Charged appears in the phone's display.

Note!

You cannot make or receive calls when your phone is in chargeonly mode.

Slow (Trickle) Charging a Deeply Discharged Battery

The battery may become deeply discharged (for example, when the battery is stored for a long period). As a result, the phone may not activate charge-only mode when the charger is connected.

- 1 Attach the charger to the phone for several hours to slowly charge (trickle charge) the battery.
- 2 After trickle charging the battery for several hours the phone should activate the charge-only mode automatically.
- 3 Continue charging the phone until the battery is fully charged.

Note!

If the phone is in charge-only mode, Battery Charged appears in the display when the battery is fully charged.

2 Getting Started

Learning About Your Mobile Phone

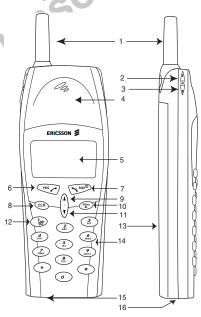
Your Ericsson mobile phone is dual-band, tri mode for TDMA systems. It operates in three modes – two digital (D) modes (800 and 1900 MHz frequency bands) and one analog (Å) (800 MHz range) mode.

Highlights of Your Mobile Phone

- •25 Ring types (including musical melody ring options)
- Caller number ID (last 20 numbers)
- Embedded phone number call-back for text messages
- Storage for 200 numbers
- Speed dial for 99 numbers including voice mail
- Super dial for 9 numbers including voice mail
- Dialing for 2 different calling cards
- Quick access to the last 40 numbers dialed
- Receives text messages with 2KB of storage
- Quick access to voice mail service
- Call duration reminder
- Digital voice encryption

The following is a list of the terms used in this user's guide to describe your Ericsson mobile phone:

- 1 Antenna
- 2 Upper Side Key
- 3 Lower Side Key
- 4 Earpiece
- 5 Display
- 6 YES key
- 7 **NO** key
- 8 Clear (CLR) key
- 9 Up Arrow (**)
- 10 Menu Key
- 11 Down Arrow (#)
- 12 Quick Access to Voice Mail
- 13 Battery
- 14 Keypad
- 15 Microphone
- 16 Charging/Handsfree Connectors



Key Functions



Press to answer a call.

Press to access last dialed number from the Standby screen. Press to send a call after entering a phone number.

Press to store menu settings.

Press (from the Missed Calls screen) for the incoming log. Press and hold from the Standby screen for zero-digit dialing. Press and hold after entering a phone number to make a calling card call.

Press to bypass preset stops in stored number sequences.



Press and hold to turn your phone On or Off.

Press to end a call.

Press to exit a menu.

Press during an incoming call to mute the ringer. Press to clear the current display text.



Press to go to the main menu.

Press from the main menu to tab right through the menus.



Press and hold for a Pause (11) character in a dial string. Press to toggle between upper and lowercase in text entry mode.



Press and hold for Stop () character in a dial string.



Press to move through menus and menu setting selections when your phone is in menu mode, or to scroll through stored numbers when you are recalling numbers from your phonebook.

Press to scroll through messages one line at a time when viewing text messages.

Press and hold to scroll through a message, one screen at a time, when viewing text messages.

Press to move the cursor to the left or to the right while in number-edit mode.



Press either key to temporarily mute the ring tone when receiving a call.

Press to change the earpiece volume during a call. Press to illuminate the backlight.



Press to return to the Standby screen.

Press to erase the last digit entered on the display.
Press and hold to delete all digits or letters you entered.
Press and hold to delete numbers in the Phone List.
Press and hold during a call to mute the microphone. After the microphone is muted, press and hold to enable the

Press to delete a selected text message.



Press keys 1-9 for digit entry.

microphone.

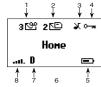
Press and hold keys 1-9 for Super Dial. During a call, press to send numbers as tones.



Press and hold for quick access to voice mail.

Phone Display Icons

- 1 Voice Mail Waiting Icon indicates the number of voice mail messages that have not been read.
- 2 New Text Mail Icon indicates the number of text messages that have not been read.



- 3 Ringer Off ()/Silent Mode () Icon indicates that your phone will not make any keypad or ringing sounds.
- 4 Keypad Lock Icon indicates that pressing the keys on the keypad has no effect. This eliminates the possibility of accidentally pressing keys.
- 5 **Battery Icon** shows the relative strength of your battery. A full icon indicates a fully-charged battery. If the phone is connected to external power and the battery is charging, the display will alternate between current battery capacity level and the external power.
- 6 **Standby Screen** indicates that the phone is in standby mode and is ready for use.
- 7 Analog/Digital Channel Indicator shows that the phone is currently operating in analog (**A**) or digital (**D**) mode.
- 8 **Signal Strength Icon** shows the relative signal strength from the wireless system. More bars indicate a stronger signal.

Display Messages

The following are common display messages on your mobile phone:

Incoming Call 472-5573	Your phone is receiving a call.
Calling 472-5573	Your phone is dialing the number shown in the display.
Ongoing Call 2:55:25	You have an active call.
762° 652° ¾ Low Battery	The battery is reaching its lowest operational power level.
System Busy	Your system has no channels available. Try again later.
	The phone is searching for the optimal wireless system.

6ED ♣× 7 Missed Calls D ■	The number of calls you have not answered.	[D]
Mic Muted 05:25 □ ■	The microphone is muted.	2.1
Preferred	The keypad is locked to prevent inadvertent key presses.	
Charging Only	The phone is turned off and is in charge-only mode. You are not able to make or receive calls.	al use
Battery Charged	When the plug icon is not alternating with the battery icon, your phone is connected to an external power source and is fully charged.	4.3
Home D	The phone ringer is muted.	
Name: Number: Position:	Allows the user to input a phone number, such as when saving a phone number to a phonebook entry.	

1. Phonebook	The PHONEBOOK Menu tab that is accessed by pressing MENU once from the Standby screen. Press YES to select.
II № [] #= 2. Messages	The MESSAGES Menu tab that is accessed by pressing MENU twice from the Standby screen. Press YES to select.
IN I E 3. Call Info	The CALL INFO Menu tab that is accessed by pressing MENU three times from the Standby screen. Press YES to select.
1. Settings	The SETTINGS Menu tab that is accessed by pressing MENU four times from the Standby screen. Press YES to select.

Basic Operations

Summary of Basic Operations

Turn your phone On or Off Answer a call End a call Increase/decrease ear volume during a call Access the main menu Go back one level in menu mode Exit menu mode from any menu level Scroll through menus or menu settings Erase the last digit or letter entered Erase all digits or letters entered Call the number shown in the display Recall a last dialed number Save the text message you are reading Select a highlighted menu setting Turn Keypad Lock On or Off Turn Phone Silent On or Off Call number in display using calling card Mute your voice during a call Mute the ringer when a call is received Check voice mail

Press and hold NO

YES NO

Either side key

MENU

NO

CLR

<u></u> or **≠**

CLR

Press and hold CLR

YES #

YES, " or =

YES

YES

MENU then *

MENU then #

Press and hold YES
Press and hold CLR

NO or either side key
Press and hold 1

Turning Your Phone On and Off

Turn your phone Off by pressing and holding **NO** until your phone sounds a beep and turns off. Turn your phone On by pressing and holding **NO** until your phone sounds a beep and turns on.

Making Calls

1 Enter the phone number you want to call by pressing the numeric keys. The number is shown in the display.

Note!

You can press **CLR** to erase one or more digits in the display, or press and hold **CLR** to erase all digits.

- 2 Press YES. Calling is shown in the display while your phone accesses the wireless network.
- 3 When the call is connected, Ongoing Call will display on your screen. The phone number that you dialed will be replaced by the call timer.



4 When you finish your conversation, press NO.

Redialing the Last Number You Called

Your telephone temporarily stores numbers you have previously called. To view these numbers, press **YES** from the Standby screen. The last number you called is shown in the display. Press a to scroll through the other numbers. You can place a call to a number shown in the display by pressing **YES**. You can delete a number from the **Outgoing Calls** by pressing and holding **CLR** while the number is shown in the display.

Super Dial

The Super Dial feature, when enabled through the **SETTINGS** menu, lets you use one-touch dialing for phone numbers stored in phonebook locations 1 through 9. To use Super Dial, press and hold the numeric key (1–9) that corresponds to the phonebook location containing the number you want to call. For example, if you want to call the number stored in phonebook location 7, press and hold 7.

Note! The first Super Dial position is reserved for quick access to voice mail.

Speed Dial

The Speed Dial feature, when enabled through the **SETTINGS** menu, lets you quickly dial a phone number stored in your phonebook. To use Speed Dial, enter the number of the phonebook location containing the number you want to call, then press **YES**. For example, if you want to call the number stored in phonebook location 12, press 1, then press 2 and press **YES**. Locations 2-99 can be used to store Speed Dial phonebook locations.

Making Credit Card Calls

You can make calling card calls from your phone by doing the following:

- 1 Press MENU from the Standby screen to access the main menu.
- 2 Press 4 to display the SETTINGS Menu.
- 3 Press 7 to display the Calling Cards submenu.
- 4 Select the Card Setup that you would like to use and press YES.
- 5 Press YES to select the Access Number.
- 6 Enter the calling card number.
- 7 Press **YES** to store the number.
- 8 Press **NO** to return to the previous screen or press **CLR** to return to the Standby screen.

te! Follow your calling card provider's flow order for entering your access number and verification number.

Stop and Pause Dialing

Stop and pause dialing lets you enter groups of numbers with stops and pauses between each group of numbers. This feature is useful when you need to dial a phone number and then another number, such as an access number for an answering machine or voice mail system.

A stop causes the phone to stop transmitting numbers until you press **YES**. You can enter a stop in a series of digits by pressing and holding **#** until **1** is shown in the display. A pause temporarily suspends transmitting numbers for approximately two seconds before sending the next series. You can enter a pause in a series of digits by pressing and holding ***** until **1** is shown in the display.

For example, if your office has a voice mail system that requires you to dial a phone number, followed by your extension, followed by an access code, you could enter the following: 555-1111 2222 33333.

When you press YES, your phone dials the number and then stops transmitting tones. When your voice mail system asks for your extension you would press YES to transmit your extension. The access code is sent after the pause. If the timing in your voice mail system does not allow for pauses, you can enter a stop instead of the pause, or use multiple pauses.

You can also store groups of numbers which can include stops and pauses in a phonebook location. You can then dial the numbers by entering the phonebook location and pressing **YES**.

Working with SMS Messages

The MESSAGES menu contains choices for specifying and accessing message services that may be available from your service provider (for example, text messages and voice mail).

Voice Mail

The **Voice Mail** submenu allows you to enter and access your voice mail access number, if you have voice mail service from your service provider. A number and the voice message icon () appear in the Standby screen to indicate the number of new unread voice messages. The two options for the **Voice Mail** submenu are Call and Configure.

Received

The **Received** submenu allows you to display the list of read and unread text messages you have received. The subject line or the first few words of each message, is displayed. Press **YES** to view the message. From this list, the user can choose to read a message, or return to the previous menu.

You can scroll through the list of messages by using the [≜] or ▼ key. Once a message is read, press YES to see the five options for the selected message: Reply, Forward, Delete, Callback List, and Lock/Unlock. Temporarily unavailable options are grayed out.

Note! Lock/Unlock toggles message auto deletion off and on. Unsent and unread messages are automatically locked.

Create

The **Create** submenu is used to enter and send a new text message. See "Entering Letters and Symbols" on page 12.

Note! If your message approaches the maximum message length, you will see a character countdown indicator in the upper left corner of the screen.

When you forward a message, you will also forward the original body of the message. However, when you reply to a message, you can choose to include the original, use a canned message, or start with a blank message.

Note! The maximum message length varies according to service provider

Once you have entered the text you want included in your SMS, press YES. You will be prompted with Send Now? to confirm that you are ready to send the message. Press YES to send the message or NO to save the message as a draft.

Note!

To send a message, you must enter a 10-digit number (unless Auto Prefix is enabled).

Canned Message

Canned Message allows you to use the 10 editable templates instead of creating an original message. For example, a canned message is "I will be <____> late for <____> on <____>." You can edit the canned message text by scrolling to the blanks in the message using the ♣ or ♣ key to quickly fill in the necessary information.

Once you have entered the text you want included in your SMS, press YES. You will be prompted with Send Now? to confirm that you are ready to send the message. Press YES to send the message or NO to save the message as a draft.

Unsent

The **Unsent** submenu allows you to display a list of saved draft messages and messages that were not successfully sent. They are displayed with the subject, if available, or the first few words of text in the order in which they were created. You can scroll through the list of messages by using the $\stackrel{\triangle}{=}$ or $\stackrel{\triangle}{=}$ key. The three options for a selected message in the **Unsent** submenu are Send, Edit, and Delete.

Sent

The **Sent** submenu allows you to display a list of sent messages. The message list is displayed with the subject, if available, or the first few words of the messages in the order they were sent. You can scroll through the list of messages by using the a key. The five options for a selected message in the **Sent** submenu are Resend, Forward, Delete, Update, and Lock/Unlock.

Note!

Update allows you to replace a previously sent message if the recipient has not yet read the original message and has a phone that supports this option. If the previously sent message was already read, then the updated message appears as a new message to the recipient.

Memory Used

The **Memory Used** submenu displays the percentage of the phone's memory that is locked and the percentage of the phone's memory that is deletable.

Note!

Messages that are not locked will automatically be deleted if more room is needed in order to create space for an incoming message, newly created message, or modified message. See "Auto Deletion" on page 11.

Delete

The **Delete** submenu allows you to erase all of your text messages by group. You can select a group of messages to delete by pressing # or * to check or uncheck the checkbox next to the group of messages you want to delete. The four options for the **Delete** submenu are Sent, Read, Unsent, and Unread.

Note!

You will be prompted to enter your PIN to enter the **Delete** submenu. The Sent and Read message groups are checked by default. Locked messages will also be deleted from the folder.

Options

Use the **Options** submenu to specify delivery preferences to be used every time you send a message. You can override these defaults by pressing **NO** when you are prompted with Use default

options? before you send a message. You will be given the option to alter your preferences.

Priority

The **Priority** submenu allows you to set delivery priority for your message. The three options for **Priority** are Normal, Urgent (+), and Emergency (!).

Callback

Enter Number

The Enter Number submenu allows you to include a callback number in your message. This means that the recipient of the message does not have to remember or write down the number, they can simply select it and press YES to dial it.

Enter Name

The Enter Name submenu allows you to input your name as you want it to appear on your recipient's screen. When you set the Presentation to Show Name, receivers of the message will not see your phone number, instead they will see your name and can press YES to call you, without actually knowing your telephone number.

Presentation

The Presentation submenu allows you to choose how you would like your callback information displayed. You can select which form of presentation you prefer by pressing or \Rightarrow to highlight an item. Select the item by pressing **YES**. The three options for presentation are None, Show Number, and Show Name.

Note! When you select **None**, no callback information will be sent.

Delivery Receipt

The **Delivery Receipt** submenu allows you to receive notification when your message is delivered to the destination address. The two options for **Delivery Receipt** are On or Off.

Auto Deletion

When you begin to run low on memory, your phone will attempt to delete sent and read messages to create additional memory space to send or receive new messages when there are three or fewer memory locations available. The two options for **Auto Deletion** are on (default) and off. If your mailbox is filled with unread or unsent messages and Auto Deletion is on (default), you will receive a warning before read and sent messages (beginning with the oldest unlocked) are deleted to allocate memory. When Auto Deletion is off, the phone will only warn you when it is low on memory and all unlocked messages have already been deleted.

Alert Sounds

The **Alert Sounds** submenu allows you to set the audible alert for the notification of new, sent, failed, or acknowledged messages. The two options for **Alert Sounds** are on and off.

Using Your Phonebook

Creating Phonebook Entries

You can add entries to your phonebook by doing the following:

- 1 Press MENU from to access the main menu.
- 2 Press 1 to display the PHONEBOOK menu

- 3 Press 1 to select Add Entry.
- 4 Press are to scroll to the name and number line. See the next section to learn how to enter names in your phonebook.
- 5 Press YES to store the new entry.

Entering Letters and Symbols

Press the appropriate key, 0-9, #, or * repeatedly until the desired letter, character, or digit appears in the display. For example, to enter an A, press the numeric key 2 once. To enter a B, press the numeric key 2 twice.

Press this	For
1	Space 1
2	ABC2ÀÁÂÇ
3	DEF3ÈÉÊË
4	GHI4ÍÎÏ
5	JKL5
6	MNO6ÑÓÔŐ
7	PQRS7
8	TUV8ÙÚÛÜ
9	WXYZ9
0	0
*	Toggles between upper and lowercase letters.
#	,.?-()'"!;:#@&\$%+-*/ =<>

Note! Character sets vary according to language selection.

Answering Calls



When your phone receives a call, the ring tone sounds, Incoming Call appears in the display, and the display and keypad backlight are illuminated. (you can disable the ring tone through the **SETTINGS** menu). If you have

Caller Number Identification (Caller ID) service from your service provider, the caller's phone number is shown in the display.

Answer the phone by pressing **YES**. Incoming Call is replaced by the call timer display. End the call by pressing **NO**.

Call Waiting

If you have call waiting service from your service provider, press **YES** to answer a call when you receive the call waiting signal. You can switch between the two calls by pressing **YES**. **Do not** press **NO** until you are ready to end both calls.

Unanswered Calls

Your phone's display shows the number of calls you have received but did not answer. You can clear the number of missed calls from the display by pressing any key except YES. If Caller Number Identification is available from your carrier, unanswered calls will be stored in the Incoming Calls of the CALL INFO menu. The icon appears next to a call that was not answered. Press YES from the Missed Calls Indicator screen to access the Incoming Call Log.

Temporarily Muting the Ring Tone

To temporarily mute the ring tone without answering the call, press NO or the upper or lower side volume key. Incoming Call is still shown in the display, and you can still answer the call by pressing YES.

Caller Number Identification

If your service provider has Caller Number Identification (Caller ID) service, your phone shows the phone number of an incoming call in the display. If the number is one that you have stored in your phonebook with a name, the name is shown when your phone rings. If the Caller ID information is not available, the message NO ID is shown in the display. The word Anonymous may be shown if the Caller ID is restricted by the service provider or by the caller.

Muting the Microphone During a Call

To mute the microphone during a call, press and hold the **CLR** key. Mic Muted appears in the display when the call is muted. Repeat this procedure to return to your call.

Increasing or Decreasing Ear Volume During a Call

Use the following instructions to increase or decrease ear volume during a call:



- To increase the ear volume during a call, press the upper key on the side of your phone.
- To decrease the ear volume during a call, press the lower key on the side of your phone.

Low Battery Power Alert

The low battery alert sounds when your battery is reaching its lowest operational power level. The words Low Battery! will appear in the display. When this happens, leave your phone turned on. The phone discharges the battery and then automatically turns off. Charge the battery within 24 hours after a complete discharge so that the battery can charge to full capacity.

Setting the Display Language

You can set the language used to display the menus for your mobile phone. To change the display language:

- 1 Press MENU from the Standby screen to access the main menu.
- 2 Press 4 to display the SETTINGS menu.
- 3 Press 9 to display the Language submenu.
- 4 Press the * or * repeatedly until the appropriate language option is highlighted. The language options are English, French, Spanish, Portuguese, Hebrew, or Russian (languages may vary by region).
- 5 Press YES to select the Language.
- 6 Press **NO** to return to the previous screen or press **CLR** to return to the Standby screen.

Note! If you accidentally select the wrong language, press MENU 49 and scroll to the correct language.

Setting the Ring Sound

To select the ring sound for your mobile phone:

- 1 Press MENU from the Standby screen to access the main menu.
- 2 Press 4 to display the SETTINGS Menu.
- 3 Press 1 to display the Sounds submenu.
- 4 Press 3 to display the Ring Sound submenu.
- 5 Press the [≜] or ▼ repeatedly until the appropriate ring sound is highlighted. You will hear two ring cycles of the currently selected ring sound as you scroll through the list of ring sounds.
- 6 Press YES to select the Ring Sound.
- 7 Press **NO** to return to the previous screen or press **CLR** to return to the Standby screen.

Setting the Ring Volume

To select the ring volume for your mobile phone:

- 1 Press MENU from the Standby screen to access the main menu.
- 2 Press 4 to display the SETTINGS Menu.
- 3 Press 1 to display the Sounds submenu.
- 4 Press 1 to display the Ring Volume submenu.
- 5 Press the a repeatedly until the appropriate ring volume is highlighted. You will hear two ring cycles of the currently selected ring volume as you scroll through each ring volume selection.
- 6 When the appropriate ring volume is highlighted, press YES.

7 Press **NO** to return to the previous screen or press **CLR** to return to the Standby screen.

Emergency Calls

Your phone was programmed with an emergency number (911) when it was manufactured. The programmed emergency number can be dialed and called at any time, if there is any emergency system available. A representative from your service provider or the retail outlet where you purchased your phone should be able to change the emergency number in your phone if a 911 system is not available in your service area.

Note! Auto Key Lock allows emergency (911) number access. Unlock Auto Key Lock by pressing MENU and then *.

If police, fire, or medical help is needed, dial 911 or your emergency number and press **YES**. Tell the dispatcher that you are calling from a wireless phone. Wireless 911 calls do not automatically provide emergency personnel with your name, location, or phone number. The dispatcher will want to know the following:

- 1 Your name and wireless phone number.
- 2 The nature of the emergency.
- 3 If police, fire, or medical assistance is needed.
- 4 The exact location of the emergency, including cross streets, mileposts, or landmarks.
- 5 How many people are involved, their condition, and if help is being administered.

System Dependent Network Features

Network Search

Your phone should be configured by your service provider for optimal network selection during roaming. If you want and your service provider allows, you can override the preconfigured selection by doing the following:

- 1 Press MENU from the Standby screen to access the main menu.
- 2 Press 4 to display the **SETTINGS** Menu.
- 3 Press 7 to display the System Select submenu.
- 4 Press 1 to select the Network Search option.
- 5 Press [≜] or ▼ repeatedly until the appropriate system selection is highlighted.
- 6 When the appropriate system selection is highlighted, press YES
- 7 Press NO to return to the previous screen or press CLR to return to the Standby screen.

Subscription Assignment

This feature gives you the ability to add a second subscription from another service provider to your phone. This offers you the option of adding a second telephone number to your mobile phone so that it will be more useful in areas to which you frequently roam.

The ability to add a second subscription is an optional feature that may be allowed by your service provider. If available, it allows you to add a new phone number for use in areas that your first subscription can be used. It is particularly useful where international roaming is not yet available.

- 1 Press MENU from the Standby screen to access the main menu.
- 2 Press 4 to display the SETTINGS Menu.
- 3 Press 6 to display the Phone Number submenu.
- 4 Press the ♣ or ➡ repeatedly until the appropriate number assignment module is highlighted.
- 5 When the appropriate number assignment module is highlighted, press YES.
- 6 Press NO to return to the previous screen or press CLR to return to the Standby screen.

International Calls

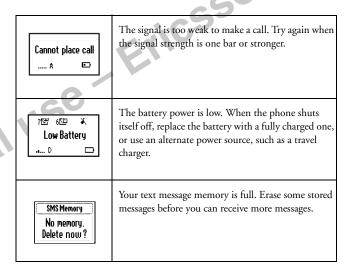
If allowed by your service provider, you can place international calls with your phone just as you would from any other phone. If you have difficulty completing international calls, check with your service provider for information.

Problem Solving

Problems and Possible Solutions

The phone does not turn On.	Recharge or replace the battery.
The phone is not ringing when a call is received.	Check for Ringer Off () or Silent Mode () icons on the Standby screen.
The battery does not seem to charge to full capacity.	Your battery is fully charged when the power indicator shows the power icon (
Calls are being dropped.	You are probably in a geographic area with minimal service. Wait until the signal strength indicator in your phone's display shows a high relative signal strength (more bars) before trying a call. Make note of geographic locations where calls are dropped and contact your service provider.
The signal strength varies.	This is a common occurrence. Transmitters are set in geographic areas and coverage is not 100% all of the time. Signal strength varies as you travel between cells.

Displayed Messages and Explanations



If you need additional information or assistance, or would like to purchase Original Ericsson Accessories: in North America, call 1-800-ERICSSON (374-2776). In Latin America, call 1-305-755-6789. All other countries, call 1-919-472-7908.

16 Problem Solving

Guidelines for Safe and Efficient Use

Since its introduction in the mid 1980s the mobile phone has been one of the most exciting and innovative products ever developed. Your phone can help you to stay in touch with your office, your home, emergency services and others.

Safety

Exposure to Radio Frequency Signals

Your wireless handheld portable telephone is a low power radio transmitter and receiver. When it is ON, it receives and also sends out radio frequency (RF) signals.

In August, 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phones. Those guidelines are consistent with the safety standards previously set by both US and international standards bodies:

- ANSI C95.1 (1992)
- NCRP Report 86 (1986)
- ICNIRP (1996)*

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C95.1).

The design of your phone complies with the FCC guidelines (and those standards).

* American National Standards Institute: National Council on Radiation Protection and Measurements; International Commission on Non-Ionizing Radiation Protection.

Antenna Care

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate FCC regulations.

Phone Operation

NORMAL POSITION: Hold the phone as you would any other telephone with the antenna pointed up and over your shoulder.

TIPS ON EFFICIENT OPERATION: For your phone to operate most efficiently:

- Extend your antenna fully (where applicable).
- Do not touch the antenna unnecessarily when the phone is in use. Contact with the antenna affects call quality and may cause the phone to operate at a higher power level than otherwise needed.

Driving

Check the laws and regulations on the use of wireless telephones in the areas where you drive. Always obey them. Also, if using your phone while driving, please:

- Give full attention to driving driving safely is your first responsibility.
- Use handsfree operation, if available.
- Pull off the road and park before making or answering a call if driving conditions so require.

In addition, Ericsson suggests the following safe driving tips if you are using your phone while driving:

- Get to know your wireless phone and its features such as speed dial and redial.
- Position your wireless phone within easy reach.
- Suspend conversations during hazardous driving conditions or situations.
- Do not take notes or look up phone numbers while driving.
- Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic.
- Do not engage in stressful or emotional conversations that may be distracting.
- Use your wireless phone to call for help.
- Use your wireless phone to help others in emergencies.

 Call roadside assistance or a special wireless non-emergency assistance number when necessary.

Electronic Devices

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against RF signals from your wireless phone.

Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of six (6") inches be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research.

Persons with pacemakers:

- Should ALWAYS keep the phone more than six inches from their pacemaker when the phone is turned ON.
- Should not carry the phone in a breast pocket.
- Should use the ear opposite the pacemaker to minimize the potential for interference.
- If you have any reason to suspect that interference is taking place, turn your phone OFF immediately.

Hearing Aids

Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider (or call the customer service line to discuss alternatives).

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn your phone OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities

Turn your phone OFF in any facility where posted notices so require.

Aircraft

FCC regulations prohibit using your phone while in the air. Switch OFF your phone before boarding an aircraft.

Blasting Areas

To avoid interfering with blasting operations, turn your phone OFF when in a "blasting area" or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

Potentially Explosive Atmospheres

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often but not always clearly marked. They include fueling areas such as gasoline stations; below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

For Vehicles Equipped with an Air Bag

An air bag inflates with great force. DO NOT place objects, including both installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious bodily injury could result.

Product Care and Operation

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

Ericsson suggests you read and observe the following for safe care and operation of your phone:

- Do not allow children to play with your phone. They could hurt themselves or others, or could accidentally damage the phone. Your phone may contain small parts that could be detached and create a choking hazard.
- Do not expose your mobile phone to moisture or extreme temperatures.
- Only Ericsson original accessories are recommended. Failure to use them may result in loss of performance or product damage, and will void the warranty.
- Do not attempt to disassemble the product. Doing so will void warranty. This product does not contain consumer serviceable components. Service should only be performed by Authorized Service Centers.
- Do not allow objects to fall on, or liquids to spill on products.
- Connect AC (power supply) only to designated power sources as marked on the product.
- To reduce risk of damage, remove the electrical cord from the outlet by pulling the AC adapter at the outlet rather than the cord.
- Make sure the electric cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- To reduce risk of electric shock, unplug the unit from the power source before attempting any cleaning. Once unplugged, use a soft cloth lightly dampened with water for cleaning.
- DANGER Never alter the AC cord or plug. If the plug will
 not fit into the outlet, have a proper outlet installed by a qualified
 electrician. Improper connection can result in risk of electric
 shock.

- Don't twist the antenna. Excess twisting will damage the antenna.
- Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (i.e., at the ear and worn on the body) as required by the FCC for each model. Body worn measurements are made while the phone is in use and worn on the body with an Ericsson accessory. The design and composition of an accessory can affect the body worn Specific Absorption Rate (SAR) levels for the phone. Ericsson has not measured, and makes no representation about the body worn SAR levels when the phone is used with non-Ericsson accessories.

Battery Information

New Batteries

The battery packaged with your phone is not fully charged. For maximum battery capacity, use your charger to condition the battery.

Recycling Your Battery

Your phone manufacturer is a member of the Rechargeable Battery Recycling Corporation (RBRC), a non-profit service organization designed to assist in the recycling of rechargeable batteries. Many areas require the recycling of rechargeable batteries. In the U.S., call 1-800-822-8837 to find out how to recycle your battery. Outside the U.S., contact your local retailer for recycling instructions.

Battery Use and Care

A rechargeable battery has a long service life if treated properly. A new battery, or one that has not been used for a long period of time, should be conditioned before using your phone. Avoid recharging a fully-charged or almost fully-charged battery. If your phone shuts off due to low battery power, you should charge the battery within 24 hours for the battery to reach full capacity.

- Do not leave your battery where it may be subjected to extremely hot or cold temperatures. This could reduce the battery's capacity.
- Do not let the metal contacts on the battery touch another metal object such as keys in your pocket. This could shortcircuit and damage the battery.
- Do not attempt to take a battery apart.
- Do not expose a battery to open flame. This could cause the battery to explode.
- Turn your phone OFF before removing the battery.
- Use only the AC/DC adapter supplied with your battery charger. Using a different adapter could be dangerous and will void your phone warranty.
- Never charge a battery when the ambient room temperature is below 50°F (10°C) or above 105°F (40°C).
- Do not allow the battery to be placed into the mouth. Battery electrolytes may be toxic if swallowed.

FDA Consumer Update

The U.S Food and Drug Administration (FDA) has been receiving inquiries about the safety of mobile phones, including cellular phones and PCS phones.

The following summarizes what is known – and what remains unknown – about whether these products can pose a hazard to health, and what can be done to minimize any potential risk. This information may be used to respond to questions.

Why the concern?

Mobile phones emit low levels of radiofrequency energy (i.e., radiofrequency radiation) in the microwave range while being used. They also emit very low levels of radiofrequency energy (RF), considered non-significant, when in the stand-by mode. It is well known that high levels of RF can produce biological damage through heating effects (this is how your microwave oven is able to cook food). However, it is not known whether, to what extent, or through what mechanism, lower levels of RF might cause adverse health effects as well. Although some research has been done to address these questions, no clear picture of the biological effects of this type of radiation has emerged to date. Thus, the available science does not allow us to conclude that mobile phones are absolutely safe, or that they are unsafe. However, the available scientific evidence does not demonstrate any adverse health effects associated with the use of mobile phones.

What kinds of phones are in question?

Questions have been raised about hand-held mobile phones, the kind that have a built-in antenna that is positioned close to the user's head during normal telephone conversation. These types of mobile phones are of concern because of the short distance between the phone's antenna – the primary source of the RF – and the person's head. The exposure to RF from mobile phones in which the antenna is located at greater distances from the user (on the outside of a car, for example) is drastically lower than that from hand-held phones, because a person's RF exposure decreases rapidly with distance from the source. The safety of so-called "cordless phones," which have a base unit connected to the telephone wiring in a house and which operate at far lower power levels and frequencies, has not been questioned.

How much evidence is there that hand-held mobile phones might be harmful?

Briefly, there is not enough evidence to know for sure, either way; however, research efforts are on-going. The existing scientific evidence is conflicting and many of the studies that have been done to date have suffered from flaws in their research methods. Animal experiments investigating the effects of RF exposures characteristic of mobile phones have yielded conflicting results. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. In one study, mice genetically altered to be predisposed to developing one type of cancer developed more than twice as many such cancers when they were exposed to RF energy compared to controls. There is much uncertainty among scientists about whether results obtained from animal studies apply to the use of mobile phones. First, it is uncertain how to apply the results obtained in rats and mice to humans. Second, many of the studies that showed increased tumor development used animals that had already been treated with cancercausing chemicals, and other studies exposed the animals to the RF virtually continuously - up to 22 hours per day.

For the past five years in the United States, the mobile phone industry has supported research into the safety of mobile phones. This research has resulted in two findings in particular that merit additional study:

- 1 In a hospital-based, case-control study, researchers looked for an association between mobile phone use and either glioma (a type of brain cancer) or acoustic neuroma (a benign tumor of the nerve sheath). No statistically significant association was found between mobile phone use and acoustic neuroma. There was also no association between mobile phone use and gliomas when all types of types of gliomas were considered together. It should be noted that the average length of mobile phone exposure in this study was less than three years.
 - When 20 types of glioma were considered separately, however, an association was found between mobile phone use and one rare type of glioma, neuroepithelliomatous tumors. It is possible with multiple comparisons of the same sample that this association occurred by chance. Moreover, the risk did not increase with how often the mobile phone was used, or the length of the calls. In fact, the risk actually *decreased* with cumulative hours of mobile phone use. Most cancer causing agents increase risk with increased exposure. An ongoing study of brain cancers by the National Cancer Institute is expected to bear on the accuracy and repeatability of these results.¹
- 2 Researchers conducted a large battery of laboratory tests to assess the effects of exposure to mobile phone RF on genetic material. These included tests for several kinds of abnormalities, including mutations, chromosomal aberrations, DNA strand breaks, and structural changes in the genetic material of blood cells called lymphocytes. None of the tests showed any effect of the RF except for the micronucleus assay, which detects structural effects on the

genetic material. The cells in this assay showed changes after exposure to simulated cell phone radiation, but only after 24 hours of exposure. It is possible that exposing the test cells to radiation for this long resulted in heating. Since this assay is known to be sensitive to heating, heat alone could have caused the abnormalities to occur. The data already in the literature on the response of the micronucleus assay to RF are conflicting. Thus, follow-up research is necessary.²

FDA is currently working with government, industry, and academic groups to ensure the proper follow-up to these industry-funded research findings. Collaboration with the Cellular Telecommunications Industry Association (CTIA) in particular is expected to lead to FDA providing research recommendations and scientific oversight of new CTIA-funded research based on such recommendations.

Two other studies of interest have been reported recently in the literature:

- 1 Two groups of 18 people were exposed to simulated mobile phone signals under laboratory conditions while they performed cognitive function tests. There were no changes in the subjects' ability to recall words, numbers, or pictures, or in their spatial memory, but they were able to make choices more quickly in one visual test when they were exposed to simulated mobile phone signals. This was the only change noted among more than 20 variables compared.'
- 2 In a study of 209 brain tumor cases and 425 matched controls, there was no increased risk of brain tumors associated with mobile phone use. When tumors did exist in certain locations, however, they were more likely to be on the side of the head where the mobile phone was used. Because this occurred in only a small

number of cases, the increased likelihood was too small to be statistically significant.⁴

In summary, we do not have enough information at this point to assure the public that there are, or are not, any low incident health problems associated with use of mobile phones. FDA continues to work with all parties, including other federal agencies and industry, to assure that research is undertaken to provide the necessary answers to the outstanding questions about the safety of mobile phones.

What is known about cases of human cancer that have been reported in users of hand-held mobile phones?

Some people who have used mobile phones have been diagnosed with brain cancer. But it is important to understand that this type of cancer also occurs among people who have not used mobile phones. In fact, brain cancer occurs in the U.S. population at a rate of about 6 new cases per 100,000 people each year. At that rate, assuming 80 million users of mobile phones (a number increasing at a rate of about 1 million per month), about 4800 cases of brain cancer would be expected each year among those 80 million people, whether or not they used their phones. Thus it is not possible to tell whether any individual's cancer arose because of the phone, or whether it would have happened anyway. A key question is whether the risk of getting a particular form of cancer is greater among people who use mobile phones than among the rest of the population. One way to answer that question is to compare the usage of mobile phones among people with brain cancer with the use of mobile phones among appropriately matched people without brain cancer. This is called a case-control study.

The current case-control study of brain cancers by the National Cancer Institute, as well as the follow-up research to be sponsored by industry, will begin to generate this type of information.

What is FDA's role concerning the safety of mobile phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as mobile phones before marketing, as it does with new drugs or medical devices. However, the agency has authority to take action if mobile phones are shown to emit radiation at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of mobile phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions at this time, FDA has urged the mobile phone industry to take a number of steps to assure public safety. The agency has recommended that the industry:

- support needed research into possible biological effects of RF of the type emitted by mobile phones;
- design mobile phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- cooperate in providing mobile phone users with the best possible information on what is known about possible effects of mobile phone use on human health.

At the same time, FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of mobile phone safety to ensure a coordinated effort at the federal level. These agencies are:

- National Institute for Occupational Safety and Health
- · Environmental Protection Agency
- Federal Communications Commission

- Occupational Health and Safety Administration
- National Telecommunications and Information Administration

The National Institutes of Health also participates in this group.

In the absence of conclusive information about any possible risk, what can concerned individuals do?

If there is a risk from these products – and at this point we do not know that there is – it is probably very small. But if people are concerned about avoiding even potential risks, there are simple steps they can take to do so. For example, time is a key factor in how much exposure a person receives. Those persons who spend long periods of time on their hand-held mobile phones could consider holding lengthy conversations on conventional phones and reserving the hand-held models for shorter conversations or for situations when other types of phones are not available.

People who must conduct extended conversations in their cars every day could switch to a type of mobile phone that places more distance between their bodies and the source of the RF, since the exposure level drops off dramatically with distance. For example, they could switch to:

- a mobile phone in which the antenna is located outside the vehicle,
- a hand-held phone with a built-in antenna connected to a different antenna mounted on the outside of the car or built into a separate package, or
- a headset with a remote antenna to a mobile phone carried at the waist

Again, the scientific data <u>do not</u> demonstrate that mobile phones are harmful. But if people are concerned about the radiofrequency energy from these products, taking the simple precautions outlined above can reduce any possible risk.

Where can I find additional information?

For additional information, see the following websites:

- Federal Communications Commission (FCC) RF Safety
 Program (select "Information on Human Exposure to RF Fields
 from Cellular and PCS Radio Transmitters")
 http://www.fcc.gov/oet/rfsafety
- World Health Organization (WHO) International Commission on Non-Ionizing Radiation Protection (select Qs & As) http://www.who.int/emf
- United Kingdom, National Radiological Protection Board http://www.nrpb.org.uk
- Cellular Telecommunications Industry Association (CTIA) http://www.wow-com.com
- U.S. Food and Drug Administration (FDA) Center for Devices and Radiological Health http://www.fda.gov/cdrh/consumer/

Footnotes

- 1 Muscat et al. Epidemiological Study of Cellular Telephone Use and Malignant Brain Tumors. In: State of the Science Symposium;1999 June 20; Long Beach, California.
- 2 Tice et al. Tests of mobile phone signals for activity in genotoxicity and other laboratory assays. In: Annual Meeting of the Environmental Mutagen Society; March 29, 1999, Washington, D.C.; and personal communication, unpublished results.
- 3 Preece, AW, Iwi, G, Davies-Smith, A, Wesnes, K, Butler, S, Lim, E, and Varey, A. Effect of a 915-MHz simulated mobile phone signal on cognitive function in man. Int. J. Radiat. Biol., April 8, 1999.
- 4 Hardell, L, Nasman, A, Pahlson, A, Hallquist, A and Mild, KH. Use of cellular telephones and the risk for brain tumors: a case-control study. Int. J. Oncol., 15: 113-116, 1999.

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A1228di/A1228dsi

Scroll through

menu setting

Select a highlighted

menu

inenu s

Making	and	Answering	Cal	ls
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Turn Phone On/Off Press and hold NO. Answer a Call Press YES End a Call Press NO Call the number Press YES shown in the display Press **MENU** then **4** 6 Activate Speed Dial Activate Super Dial Press MENU then 4.5 Access the Press YES outgoing call log Dial a number Press YES displayed in the incoming/outgoing call log Erase the last digit Press CLR or letter entered Erase all digits or Press and hold CLR letters entered While in Menu Mode Press NO Go back one level Return to Standby Press CLR

Press MENU

Press YES

During Calls

Press lower side kev Decrease ear volume Increase ear volume Press upper side key Access main menu Press MENU

Working with Your Phonebook

Add an entry Press MENU then 1 Press MENU then 12. Call an entry Scroll to entry (** or . Press YES to dial. Delete all entries Press MENU then 13 Entries used Press MENU then 14

Working with Messages

Voice Mail Press MENU then 21 Received Press MENU then 2.2. Press MENU then 23 Create Unsent Press MENU then 24 Sent Press MENU then 2.5 Press MENU then 26 Memory Used Delete Press MENU then 2.7 Options Press MENU then 2.8 Press and hold 1 Ouick access to voice mail

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Working with Call Info

Outgoing call list	Press MENU then 3 1
Incoming call list	Press MENU then 3 2
Time since reset	Press MENU then 33
Call totals	Press MENU then 34
Erase call lists	Press MENU then 35
Working With Settings	

Working With Settings

Sounds	Press MENU then 4 1
Auto Key Lock	Press MENU then 42
Super Dial	Press MENU then 43
Speed Dial	Press MENU then 44
Calling Cards	Press MENU then 45
Phone Number menu	Press MENU then 46
System Select menu	Press MENU then 47
Backlight	Press MENU then 48
Language	Press MENU then 49

Making Calling Card Calls

Enter the number you want to call. Press and hold **YES** to use your calling card. Follow your calling card provider's flow order for entering your access number and verification number. Not for comi

Making Emergency Calls

You will be able to dial 911 (or your emergency number) at any time, regardless of any call restrictions that you have set.

Key Shortcuts

PHONEBOOK menu MENU then 1 MESSAGES menu MENU then 2 CALL INFO menu MENU then 3 SETTINGS menu MENU then 4

Frequently Dialed Numbers

Visit us on the web at:

http://mobile.ericsson.com



The A1228di/A1228dsi Menu

You can quickly access several commonly used menus by simply pressing the **MENU** key. The menus are organized in a circle. Quickly access menus and settings using the numbers that appear next to each menu and setting. For example, access the Auto Key Lock submenu by pressing **MENU** and then entering 42.

